



## The use of prognostic spatial information at the evaluation of the QPF for heavy convective rainfalls

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We present the results of the last testing the verification of Quantitative Precipitation Forecast (QPF) by spatial techniques. The QPF relates to the patterns with heavy convective rainfalls over the CR. The work aims at testing the hypothesis how to express the QPF uncertainty in the forecast time when the precipitation data are not available yet. We apply the QPF verification to several QPF categories which significantly differ in the verification results. The tests referred to in this contribution show (a) what spatial characteristics are suitable to describe the structure of the QPF field, (b) what is the relationship between diagnostic and prognostic spatial characteristics, and (c) how differ the verification results following from standard verification in comparison with the verification stratified by diagnostic and prognostic parameters.

The testing covers the QPF of 3h precipitation produced by the NWP model ALADIN CZ, operated in the Czech Hydro-meteorological institute (CHMI). The CHMI operational product MERGE, which merges the radar-based rain rate with the data from the gauge stations, was the source of the verification data. The diagnostic and prognostic spatial characteristics include basic precipitation characteristics over the domain, and the structural SAL based parameters. The verification uses the FSS (Fraction Skill Score) approach which means that various values of precipitation threshold and of the size elementary areas are studied.